

This directory contains the folders for the CSC 497 Interdisciplinary Project

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Directory Contains

Dataset: Contains the directories: AudioData, and MidiData each of which contains 11 Wav and Midi files respectively.

Previous Versions: Previous versions and trial code for the framework. The Research Diary references them, so I left them here. Also contains a directory that contains a small amount of tutorial code.

Project Report: Contains the Project Report

Research Diary: Contains the Research Diary

Saved Data: Some sample data for reference. Contains three directories:

CQT: Contains the CQT librosa graphs

NN_Outputs: Contains the log outputs of several attempts at NN training. The log information used in the report is contained in 'Optimizers_Output_Data.txt.' The log information of 'transcription_machine.py' also included metrics for constant thresholding (without machine learning). The metrics to thresholding are located in 'Constant_Thresholding.txt.'

Piano Rolls: Contains the Piano Roll graphs for various NN outputs. The Binary Rolls used in the Report are contained in the folder

The pickle files (.p) that store the datasets

DNN_transcription.py: The main operating program. Details are in the header of the file.

- Code Dependencies:
- Either Python 3.4 or 3.5
- Numpy (with Lapack and Blas), Scipy, Matplotlib,
- pretty_midi (download from Github, not from Python)
- Librosa
- Keras (use Tensorflow backend), Tensorflow, pyyaml